

RAW SEQUENCE LISTING

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Application Serial Number: 10/536, 606
Source: PCT
Date Processed by STIC: 03/06/2006

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/536,606

DATE: 03/06/2006
TIME: 15:17:43

Input Set : A:\25421-502NATL.txt
Output Set: N:\CRF4\03062006\J536606.raw

3 <110> APPLICANT: Cosson et al.
 5 <120> TITLE OF INVENTION: VIRULENCE GENES, PROTEINS, AND THEIR USE
 7 <130> FILE REFERENCE: 25421-502NATL
 9 <140> CURRENT APPLICATION NUMBER: 10/536,606
 10 <141> CURRENT FILING DATE: 2005-05-26
 12 <150> PRIOR APPLICATION NUMBER: PCT/CH2003/00836
 13 <151> PRIOR FILING DATE: 2003-12-19
 15 <150> PRIOR APPLICATION NUMBER: 10/324,967
 16 <151> PRIOR FILING DATE: 2002-12-19
 18 <160> NUMBER OF SEQ ID NOS: 64
 20 <170> SOFTWARE: PatentIn version 3.2
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 1050
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Pseudomonas aeruginosa
 27 <400> SEQUENCE: 1
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 30 atgcaggcgg tcatgcgcc a gatcatgacc gggcagtgc cccgacgcga gatcgccgccc 120
 32 ttccgtatgg gcatgcggat gaagagcgaa accatcgacg agatcgctgg cgccgtggcg 180
 34 gtatgcgcg aactggccga cggcgtgcag ttgcctacgc tgaagcatgt ggtgcacgtg 240
 36 gtcggcaccc gccccatgg cgcgaacatcc ttcaacgtgt ctcggcggc gtccttcgtg 300
 38 gtcggcccg ctggcgccaa ggtcgccaaa cacggtaacc ggcgggtctc cggcaagagc 360
 40 ggcagcgccg acttgcttgg a gcccggccgc atctacctgg agctgaccc cgaacaggtg 420
 42 ggcgttgca tgcacaccgt cggcgtcggt ttcatgttgc cccaggtcca ccacaaggcg 480
 44 atgaagtacg cccgggtcc ggcggcgcag ctgggttgc ggactctgtt caacatgctt 540
 46 gcccactga ccaacccggc gggagtcagg caccaggtgg tcgggggtttt caccaggaa 600
 48 ctgtcaagc cgctggctga atgtctcaag cgtctcgca ggcggcatgt gctgggtgt 660
 50 cattcgccgc acgggttggc cggatccgt ctggccgcgg cgacccacat tgccgagttg 720
 52 aaggacggcg aggtacgcga gtacgaagtgc gtcggcggagg acttcgggat caagagccag 780
 54 accctgtatgg ggctggaggt cgacagtccg caggcctcg tggaaactgtat ccgcgacgct 840
 56 ttggggcgcc gcaagaccga ggctggcgag aaggccgccc agctgatgt gatgaatgcc 900
 58 ggcccgacac tgtacgtgc cgatctggcg accagcctgc acggggcat tcaactggcc 960
 60 cacatgccc tgcacaccgg gctggcacgg gagaagatgg acgaacttgtt ggccttcacc 1020
 62 gcctttaca gagaggagaa cgcacagtga 1050
 65 <210> SEQ ID NO: 2
 66 <211> LENGTH: 349
 67 <212> TYPE: PRT
 68 <213> ORGANISM: Pseudomonas aeruginosa
 70 <400> SEQUENCE: 2
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 73 1 5 10 15
 76 Thr Thr Glu Glu Met Gln Ala Val Met Arg Gln Ile Met Thr Gly Gln
 77 20 25 30

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80 Cys Thr Asp Ala Gln Ile Gly Ala Phe Leu Met Gly Met Arg Met Lys
 81 35 40 45
 84 Ser Glu Thr Ile Asp Glu Ile Val Gly Ala Val Ala Val Met Arg Glu
 85 50 55 60
 88 Leu Ala Asp Gly Val Gln Leu Pro Thr Leu Lys His Val Val Asp Val
 89 65 70 75 80
 92 Val Gly Thr Gly Gly Asp Gly Ala Asn Ile Phe Asn Val Ser Ser Ala
 93 85 90 95
 96 Ala Ser Phe Val Val Ala Ala Gly Gly Lys Val Ala Lys His Gly
 97 100 105 110
 100 Asn Arg Ala Val Ser Gly Lys Ser Gly Ser Ala Asp Leu Leu Glu Ala
 101 115 120 125
 104 Ala Gly Ile Tyr Leu Glu Leu Thr Ser Glu Gln Val Ala Arg Cys Ile
 105 130 135 140
 108 Asp Thr Val Gly Val Gly Phe Met Phe Ala Gln Val His His Lys Ala
 109 145 150 155 160
 112 Met Lys Tyr Ala Ala Gly Pro Arg Arg Glu Leu Gly Leu Arg Thr Leu
 113 165 170 175
 116 Phe Asn Met Leu Gly Pro Leu Thr Asn Pro Ala Gly Val Arg His Gln
 117 180 185 190
 120 Val Val Gly Val Phe Thr Gln Glu Leu Cys Lys Pro Leu Ala Glu Val
 121 195 200 205
 124 Leu Lys Arg Leu Gly Ser Glu His Val Leu Val Val His Ser Arg Asp
 125 210 215 220
 128 Gly Leu Asp Glu Phe Ser Leu Ala Ala Ala Thr His Ile Ala Glu Leu
 129 225 230 235 240
 132 Lys Asp Gly Glu Val Arg Glu Tyr Glu Val Arg Pro Glu Asp Phe Gly
 133 245 250 255
 136 Ile Lys Ser Gln Thr Leu Met Gly Leu Glu Val Asp Ser Pro Gln Ala
 137 260 265 270
 140 Ser Leu Glu Leu Ile Arg Asp Ala Leu Gly Arg Arg Lys Thr Glu Ala
 141 275 280 285
 144 Gly Gln Lys Ala Ala Glu Leu Ile Val Met Asn Ala Gly Pro Ala Leu
 145 290 295 300
 148 Tyr Ala Ala Asp Leu Ala Thr Ser Leu His Glu Gly Ile Gln Leu Ala
 149 305 310 315 320
 152 His Asp Ala Leu His Thr Gly Leu Ala Arg Glu Lys Met Asp Glu Leu
 153 325 330 335
 156 Val Ala Phe Thr Ala Val Tyr Arg Glu Glu Asn Ala Gln
 157 340 345
 160 <210> SEQ ID NO: 3
 161 <211> LENGTH: 918
 162 <212> TYPE: DNA
 163 <213> ORGANISM: Pseudomonas aeruginosa
 165 <400> SEQUENCE: 3
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 168 gaggtggccg ccgagttcga taacccggtg atgctgtact cgatcgccaa ggattccgcg 120
 170 gtcatgctgc acctggcccg caaggccttc ttccccggca agctgccctt cccgggtatg 180
 172 cacgtggaca cccgctggaa attccaggag atgtacaggt tccgtgatcg gatggtcgag 240

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174	gaaatgggcc	tggatctgat	caccacgtc	aaccggacg	gcgtcgccca	ggcatcaac	300
176	ccgttcaccc	acggcagcgc	caagcacacc	gacgtgatga	agaccgaggg	actacaaggcag	360
178	gccctggaca	agtacggttt	cgacgctgcc	ttcggcggtg	cgccgcgcga	cgaggagaag	420
180	tcgcgggcca	aggaacgggt	ctattcggtc	cgcacagca	agcaccgctg	ggaccgcgaag	480
182	aaccagcgtc	ccgagctgtg	gaacatctac	aacgcaagg	tgaagaaggg	cgagtcgatc	540
184	cgcgtcttcc	cgctgtccaa	ctggaccgag	ctggacatct	ggcaatacat	ctacctggaa	600
186	ggcatccccga	tcgtcccgt	gtacttcggc	gccgagcgcg	aggtcatcga	gaagaatggc	660
188	acattgatca	tgatcgacga	cgagcgcac	ctcgagcatc	tctctgacga	agagaaagcc	720
190	cgcacatcgaga	agcgcatgg	gcgcttcgg	accctcggt	gctacccgct	caccggcgcg	780
192	gtcgagtcca	gcccaccac	gctgcccggaa	atcatccagg	aatatgcct	gacgcgtact	840
194	tccgaacgc	agggccgggt	catcgaccat	gaccaggccg	gttcgatgga	agaaaagaaa	900
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200	<211>	LENGTH:	305				
201	<212>	TYPE:	PRT				
202	<213>	ORGANISM:	Pseudomonas aeruginosa				
204	<400>	SEQUENCE:	4				
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210	His Ile Ile Arg Glu Val Ala Ala Glu Phe Asp Asn Pro Val Met Leu						
211	20	25	30				
214	Tyr Ser Ile Gly Lys Asp Ser Ala Val Met Leu His Leu Ala Arg Lys						
215	35	40	45				
218	Ala Phe Phe Pro Gly Lys Leu Pro Phe Pro Val Met His Val Asp Thr						
219	50	55	60				
222	Arg Trp Lys Phe Gln Glu Met Tyr Arg Phe Arg Asp Arg Met Val Glu						
223	65	70	75	80			
226	Glu Met Gly Leu Asp Leu Ile Thr His Val Asn Pro Asp Gly Val Ala						
227	85	90	95				
230	Gln Gly Ile Asn Pro Phe Thr His Gly Ser Ala Lys His Thr Asp Val						
231	100	105	110				
234	Met Lys Thr Glu Gly Leu Lys Gln Ala Leu Asp Lys Tyr Gly Phe Asp						
235	115	120	125				
238	Ala Ala Phe Gly Gly Ala Arg Arg Asp Glu Glu Lys Ser Arg Ala Lys						
239	130	135	140				
242	Glu Arg Val Tyr Ser Phe Arg Asp Ser Lys His Arg Trp Asp Pro Lys						
243	145	150	155	160			
246	Asn Gln Arg Pro Glu Leu Trp Asn Ile Tyr Asn Gly Lys Val Lys Lys						
247	165	170	175				
250	Gly Glu Ser Ile Arg Val Phe Pro Leu Ser Asn Trp Thr Glu Leu Asp						
251	180	185	190				
254	Ile Trp Gln Tyr Ile Tyr Leu Glu Gly Ile Pro Ile Val Pro Leu Tyr						
255	195	200	205				
258	Phe Ala Ala Glu Arg Glu Val Ile Glu Lys Asn Gly Thr Leu Ile Met						
259	210	215	220				
262	Ile Asp Asp Glu Arg Ile Leu Glu His Leu Ser Asp Glu Glu Lys Ala						
263	225	230	235	240			
266	Arg Ile Glu Lys Arg Met Val Arg Phe Arg Thr Leu Gly Cys Tyr Pro						
267	245	250	255				

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270 Leu Thr Gly Ala Val Glu Ser Ser Ala Thr Thr Leu Pro Glu Ile Ile
 271 260 265 270
 274 Gln Glu Met Leu Leu Thr Arg Thr Ser Glu Arg Gln Gly Arg Val Ile
 275 275 280 285
 278 Asp His Asp Gln Ala Gly Ser Met Glu Glu Lys Lys Arg Gln Gly Tyr
 279 290 295 300
 282 Phe
 283 305
 286 <210> SEQ ID NO: 5
 287 <211> LENGTH: 822
 288 <212> TYPE: DNA
 289 <213> ORGANISM: Pseudomonas aeruginosa
 291 <400> SEQUENCE: 5
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 294 ctggccgact ggccgcggca cgtgggtggc cgctcgaagg ccgacgaatc gccggtgact 120
 296 gccgcccacc tggccgcgc ccatatatgg gaggcggtat tgccggcgct ggccgcggac 180
 298 attccgggtgc ttccccaaga ggattgcgag ataccgctga gcgagcgcgg ccactggcg 240
 300 cgctgggtggc tggtgacccc gctggacgc accaaggagt tcatactccgg tagcgaggag 300
 302 ttccaccgtca acgtggccct ggtcgaggat ggccgggtgc tggtcgccct ggtcgccgtg 360
 304 ccgggtgagcg gccgctgcta ctacgggtggc gccggctctcg tgccctggcg cgaggaggcc 420
 306 gatggccgcg cgcaaccgat cagtgtgcgc ctggagcccg aggaggcctt caccgtggtg 480
 308 gccagcaagg gccatggcag cccggcccaag gagccctgc tggatggctt gagcgagcgc 540
 310 ttccggcgacc tgccggcgacg cagcatcgcc agttcgctga agttctgcct gctggccgag 600
 312 ggcgctgccc actgttatcc ggcgctgacg ccaacctcgc aatgggacac ggccggccgccc 660
 314 cagggtgtgc tggaaaggcgcc cggcgccgag gtgctcgacc tgcattggtgcc gccattcacc 720
 316 tacgagccgc gcgaggattt cctcaacggc tccttcctgg ccctgcccgg cgccggccgag 780
 318 tggcgcagcg agctgatcca actggcgccgc ggcgtgcact ga 822
 321 <210> SEQ ID NO: 6
 322 <211> LENGTH: 273
 323 <212> TYPE: PRT
 324 <213> ORGANISM: Pseudomonas aeruginosa
 326 <400> SEQUENCE: 6
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 329 1 5 10 15
 332 Gly Glu Ala Ile Leu Pro His Trp Arg Ala Asp Val Val Val Arg Ser
 333 20 25 30
 336 Lys Ala Asp Glu Ser Pro Val Thr Ala Ala Asp Leu Ala Ala His His
 337 35 40 45
 340 Ile Leu Glu Ala Gly Leu Arg Ala Leu Ala Pro Asp Ile Pro Val Leu
 341 50 55 60
 344 Ser Glu Glu Asp Cys Glu Ile Pro Leu Ser Glu Arg Gly His Trp Arg
 345 65 70 75 80
 348 Arg Trp Trp Leu Val Asp Pro Leu Asp Gly Thr Lys Glu Phe Ile Ser
 349 85 90 95
 352 Gly Ser Glu Glu Phe Thr Val Asn Val Ala Leu Val Glu Asp Gly Arg
 353 100 105 110
 356 Val Leu Phe Gly Leu Val Gly Val Pro Val Ser Gly Arg Cys Tyr Tyr
 357 115 120 125
 360 Gly Gly Ala Gly Leu Gly Ala Trp Arg Glu Glu Ala Asp Gly Arg Ala

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361	130	135	140		
364	Gln Pro Ile Ser Val Arg	Leu Glu Pro Glu Glu Ala Phe Thr Val Val			
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368	Ala Ser Lys Arg His Gly Ser Pro Ala Gln Glu Arg Leu Leu Asp Gly				
369		165	170	175	
372	Leu Ser Glu Arg Phe Gly Asp Leu Arg Arg Ala Ser Ile Gly Ser Ser				
373		180	185	190	
376	Leu Lys Phe Cys Leu Leu Ala Glu Gly Ala Ala Asp Cys Tyr Pro Arg				
377		195	200	205	
380	Leu Thr Pro Thr Ser Gln Trp Asp Thr Ala Ala Ala Gln Gly Val Leu				
381		210	215	220	
384	Glu Gly Ala Gly Gly Glu Val Leu Asp Leu His Gly Ala Pro Phe Thr				
385		225	230	235	240
388	Tyr Glu Pro Arg Glu Asp Tyr Leu Asn Gly Ser Phe Leu Ala Leu Pro				
389		245	250	255	
392	Arg Ala Ala Glu Trp Arg Ser Glu Leu Ile Gln Leu Ala Arg Ala Leu				
393		260	265	270	
396	His				
400	<210> SEQ ID NO: 7				
401	<211> LENGTH: 1299				
402	<212> TYPE: DNA				
403	<213> ORGANISM: Pseudomonas aeruginosa				
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408	cgtgccgggt tcgagggtgt ggtggtcgac cgtcaggacg gtcccgcgct ggaaaccagc		120		
410	ttcgccaaacg ccggccaggt gtctcccggc tacgcttcgc cctgggcagc cccgggcatt		180		
412	ccccctgaagg ccatgaagtg gctgctggaa aagcacgcgc cgctggccat caagctcacc		240		
414	tccgatccca gccagtagcgc ctggatgctg cagatgctgc gcaactgcac cgccgagcgc		300		
416	tacgcccgtga acaaggagcgc catggtccgc ctgtccgagt acagccgcga ttgcctcgac		360		
418	gaactgcgcg ccgagaccgg catcgctac gagggccgca ccctcggcac cacccaactg		420		
420	ttccgcaccc aggcgcagct ggacgcccggc ggcaaggaca tcgcccgtct cgagcgctcc		480		
422	ggcgtgcacct acgagggtct cgaccgcgc ggcatcgccc gcgttagagcc ggctttggcc		540		
424	aagggtgcgcg acaagactgtt cggcgccttg cgcctgccc acgaccagac cggcgactgc		600		
426	cagctgttca ccacccgcct ggccggaaatg gccaaggggcc tgggcgttga gttccgcgttc		660		
428	ggccagaaca tcgagcgcct ggacttcgccc ggccgaccgca tcaacggcggt gctggtaaac		720		
430	ggcgaattgc tcaccgcga ccactacgtg ctggccctgg gcagctactc gccgcaactg		780		
432	ctcaagccgc tgggtatcaa ggctccggc tatccgctga agggttattc gtcgaccgtg		840		
434	ccgatcacca acccggagat ggccgcgcgacc tcgaccatcc tcgacgagac ctacaagggt		900		
436	gcatcaccgc gttcgacca gccatccgc gtcggcggca tggcggaaat cgccggcttc		960		
438	gacctgtcgc tgaacccgcg ccgcgcgcgag accctggaaa tgatcaccac cgacctctat		1020		
440	cccgaggccgc gcatatcg ccaggcgacc ttctggaccg gcctgcgccc ggcgaccccg		1080		
442	gatggcaccgc gatcgctcg cgccacccgc taccgcaacc tggcgtctaa taccggccac		1140		
444	ggcacccctgg gttggaccat ggcctgcggg tcgggtcgct acctggccga cctgatggcg		1200		
446	aagaagcgcc cgcatcgatcg taccgaaggc ctggatattt cccgtctacag caattccccg		1260		
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452	<211> LENGTH: 432				
453	<212> TYPE: PRT				
454	<213> ORGANISM: Pseudomonas aeruginosa				

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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:37; N Pos. 85,88,174,175,245,293,319,325

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L:4828 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:60

M:341 Repeated in SeqNo=37